Millers will please examine pages 37 to 40, as they contain something of interest to them.

—OF THE—

HART EMERY WHEEL CO.

(LIMITED),

HAMILTON, CANADA.

AWARDED

GOLD MEDAL

—OF—

TORONTO INDUSTRIAL EXHIBTION ASSOCIATION.

HAMILTON:
A. LAWSON & CO., PRINTERS, 10 YORK STREET.

— THE —

HART EMERY WHEEL CO.

(LIMITED),

INVITE CORRESPONDENCE ON THE SUBJECT OF

Manufacturing Any Article of Emery,

— OR —

MACHINES INTENDED FOR GRINDING OR POLISHING.

They will give prompt attention to inquiries or suggestions, and any one having an idea that he wishes to have perfected by experiment can make use of the HART COMPANY. They will only be too glad to assist in developing any device connected with the business of Emery manufacture.

1887.

CATALOGUE and PRICE LIST

—OF THE—

HART EMERY WHEEL CO.,

(LIMITED.)

HAMILTON, CANADA,

MANUFACTURERS OF THE CELEBRATED

HART'S PATENT

SOLID EMERY AND CORUNDUM WHEEL.

"THE PREMIER WHEEL OF CANADA."

Acknowledged by Competitors to be in use in fully one-half of the shops on the American Continent.

Awarded the Gold Medal (first and only one) at the Toronto Exposition, 1884.

HAMILTON:
A. LAWSON & CO., No. 10 YORK STREET.

1886.

INDEX

Hints to Emery Wheel Users..... 3

Hard and Soft Wheels..... 6

Brass Wire Web..... 7

How to Order Wheels..... 8

Price List Solid Wheels..... 9

Price List Paper Polishing Wheels.....13

Miscellaneous Articles.....14

Machines for Metal Workers.....17

Polishers Supplies..... 27

Machines for Polishing Wheels.....28

Machines for Wood Workers (including Saw Gummers and Saw Sharpeners).....30

Machines for Flour Milling.....36

Economy in the use of Emery Wheels.

HINTS TO CONSUMERS.

As the true interests of both manufacturers and consumers of Emery Wheels are identical, we hope the following hints will be read carefully.

Substantial Grinders. 1st. Provide heavy and substantial grinders or machines so that the Wheels will not overtax them in running. Place the machines on a solid floor.

N. B.—Our Grinders (see page 14 to 20) have been properly proportioned to the sizes of Wheels named with each machine.

Cone Pulleys Necessary. 2nd. Do not fail to have cone pulleys so graduated that as the Wheels wear down the number of revolutions of the mandrel can be properly increased.

N. B.—The absence of cone pulleys causes more waste in Wheels and time than perhaps any other fault. If a Wheel be run until worn out within at least 200 revolutions of our card speed, it will wear well and cut well. On the other hand if there be no increase of speed to meet the decreased diameter, the Wheel will wear away more and more rapidly as it diminishes in size, while its cutting powers decrease in ratio, The brass wire web is an excellent detector of this waste. If a wheel be run too slowly the emery disintegrates faster than the wire wears, and the latter becomes prominent. *Whenever the brass wire web ceases to wear equally with the emery, one of two things is certain; either the Wheel is not intended for the work it is put to, or it is being run too slowly.*

Collars on Both Sides of Wheels. 3rd. Invariably use iron collars on both sides of the Wheel. The collar ought to be about one-fourth the diameter of the wheel. Rubber washers ought to be used, especially with thin wheels.

Keep the Machines in good order. 4th. Exercise constant supervision over the grinder or machine. Keep it well babbitted, allow no end play, never allow the mandrel to run out of true.

N. B.—Especially in large shops it is well to have one man responsible for the state of the Emery Grinders and Wheels, because what is every man's business is no man's affair.

Test all New Wheels. 5th. Before putting a new Wheel on the mandrel, tap it lightly with a hammer to ascertain that it is sound. If it *rings* it has not suffered from ill usage and may safely be put to use.

N. B.—All our Wheels are thoroughly tested at a very much higher strain than they are subjected to in use, and then packed carefully. In handling *en route* they may be abused, hence the propriety of testing immediately before running them.

Make sure that the Belt is on Proper Step of Cone. 6th. Before starting a new Wheel, notice if the belt is on the proper step of the cone. Forbid the operator to alter the speed at any time without leave from the foreman.

N. B.—*Centrifugal force is proportional to the square of the velocity*, that is, if the revolutions of the mandrel be doubled, the strain on the Wheel is increased *four times*. In a three-step cone the fast speed will likely be at least double that of the slow. The importance of the above precaution will therefore be apparent.

Wheels should run without jar. 7. See that the motion of the Wheel is true and even, before allowing it to go into work.

N. B.—All our Wheels are thoroughly balanced. If they do not run smoothly without jar, the emery machine needs overhauling and should be put right at once.

Keep the Wheels true. 8. No Wheel should be neglected long enough to allow it to get perceptably out of true. Besides the danger of running such Wheels there is waste—waste in time and waste in undue wear of the Wheel.

N. B.—A good workman constantly grinding on a well-mounted Wheel will keep it true with his work. When a Wheel is used by every one for any kind of job it is only a question of time when it will get out of true. A diamond is the best tool for truing Emery Wheels. No shop can afford to be without one.

Light Pressure best in Grinding. 9th. In grinding see that heavy pressure on the Wheel is avoided.

N. B.—The idea that heavy pressure produces quick cutting is very natural, very common, and very erroneous. Light pressure avoids heating and consequent "glazing" or smoothing over of the surface of the Wheel. A few minutes of heavy pressure will produce a polished surface.

Keep the Rests close up to the Wheel.

10th. If Wheels are run towards the operator see that the rest is close up to the face and side of the Wheel.

N. B.—This precaution, if acted upon, will put an end to the serious accidents that befall Emery Wheel users, as the article being ground cannot be jammed between the rest and the Wheel

TO SUM UP THE FOREGOING.

1. Put your machines on a solid floor and don't overtax them with heavy Wheels.

2. Use machines with cone pulleys.

3. Always use collars on both sides of the Wheel and rubber washers, especially with thin Wheels.

4. Keep the machines in good order

5. Test all Wheels before putting them on the mandrel.

6. See that the belt is on the proper step of the cone.

7. The Wheels should run without any jar.

8. Keep the Wheels true.

9. Press lightly in grinding.

10. Keep the rests close up to the Wheels.

If all Emery Wheel users would act on the above hints, they would save money, time and trouble.

HARD AND SOFT WHEELS.

When first put into use an Emery Wheel may seem too hard, but this hardness decreases somewhat when the Wheel has been used for a time. Do not be in a hurry therefore, to condemn such a Wheel before giving it a good trial. It needs a little wear to get a really good Emery Wheel up to its best cutting state.

We can make Wheels that will last ten years or ten days—used on the same work. Hardness in Hart Wheels is not obtained by any process of tempering requiring skill, or subject to any chance of failure.

We make hard Wheels and soft Wheels AT WILL, simply by altering the proportions of the compound.

We know exactly how hard a Wheel will be before we make or finish it.

Therefore, if our customers complain of a Wheel being too hard or too soft—one of two things is certain. Either the speed is not right or the wheel is not adapted to the work it is being used for.

In either case let us be notified at once, with full particulars of speed of mandrel, kind of work, and whether the Wheel has proved too soft or too hard, and prompt attention will be given to the matter.

THE BRASS WIRE WEB.

The Hart Wheel has now been used in the United States market for twelve years. Every year from 1873 to 1878, inclusive, the business doubled itself. Up to 1878, or during these years of unexampled success, the Brass Wire Web **was not used at all.** The Wire Web patent was issued in 1878, when the reputation of the Hart Wheel was thoroughly established, and since then the Web has been inserted in all Wheels unless orders are given to dispense with it. Its value consists in its being a safeguard in cases of accidental ill-usage of the Wheel. We have had many instances of the Web preventing the complete breakage of the Wheel when cracked by an accidental blow, the use of only one collar, or other mis-management. If a perpetual common sense use of Emery Wheels could be depended upon—if the instructions were always carefully followed—if accidents to the Wheel never could happen—if the Wheel was never subjected to anything but its legitimate work, at its proper speed—then the necessity of any strengthener would cease. Until then the Wire Web is and must always be considered a valuable addition to an Emery Wheel.

It does not effect the cut, as the wire, if the Wheel be run at the proper speed, **wears in advance** of the Emery.

Several of our largest customers, having confidence that their method of using Emery Wheels renders the Wire Web unnecessary, take the Wheel without it, but unless requested not to do so, we always put in one or more Webs proportioned in strength to the weight of the Wheel.

HOW TO ORDER SPECIAL WHEELS.

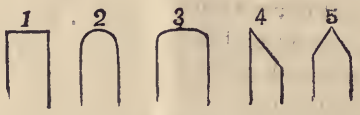
The Hart Emery Wheel Company make a specialty of supplying solid Emery Wheels adapted to the work. It is found that a Wheel that suits perfectly in one factory is not approved of in another, though it be used for the same purpose. We understand therefore, the futility of trying to make the work accommodate itself to the Wheel by filling orders out of a few standard grades in stock. We propose always to make special Wheels, to do special grinding, and to do it thoroughly. By special grinding we mean a continuous run on one article, or one class of articles, as reaper guards, plow work, carriage hardware, etc For general purposes, ordinary tool grinding and saw gumming, stocks are kept at the factory and by the various jobbing houses who handle our goods.

Special Wheels can be delivered within a week at any time; but in order to make them a perfect success, great care should be taken when ordering for the first time to describe minutely the article to be ground and the result desired. Where practicable, a sample of the article would assist us in deciding on the best style of Wheel. On special work we can assure our friends a saving of one-half in the cost of grinding by giving careful attention to directions for our guidance.

In ordering Wheels for the first time please note particularly the following items: (Subsequent orders can be filled by referring to the previous transactions, as we keep a full record of all Wheels we make.)

1. Diameter and thickness of Wheel, and size of mandrel hole.
2. Whether Wheel is to grind surfaces or edges.
3. The metal to be ground—wrought or cast-iron, steel or brass, &c.
4. Description of work to be done by the Wheel, coarse or fine.
5. Speed of mandrel.
6. Is work held in hand or held mechanically and fed up to the Wheel?

Ordinary Patterns of Emery Wheels



In ordering Emery Wheels of any of the above patterns, the number only need be mentioned.

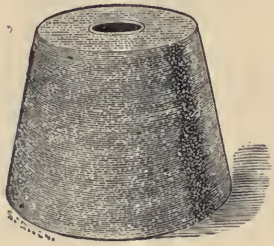
PRICE LIST OF HART'S PATENT EMERY WHEELS.

No. of revolutions per min'te	Dia. in Inches	Thickness of Wheels in inches.														
		¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2	2½	3	3½	4
7.400	3	50	65	75	88	95	1 05	1 10	1 25	1 35	1 45	1 60	1 85	2 10	2 60	3 00
5.450	4	80	1 00	1 10	1 25	1 35	1 50	1 60	1 90	2 20	2 50	2 75	3 25	3 85	4 60	5 00
4.400	5	1 00	1 25	1 40	1 65	1 80	2 00	2 10	2 60	3 00	3 45	3 80	4 65	5 40	6 40	7 40
3.600	6	1 40	1 60	1 75	2 20	2 50	2 80	3 00	3 70	4 30	5 00	5 60	6 90	8 25	9 50	11 00
3.150	7	1 85	2 10	2 30	2 80	3 15	3 65	4 00	5 00	5 60	6 40	7 25	8 90	10 55	11 10	12 60
2.750	8	2 12	2 40	2 60	3 20	3 60	4 10	4 50	5 70	6 40	7 60	8 30	10 20	12 00	14 00	16 00
2.450	9	.....	2 90	3 15	3 60	3 85	4 50	4 90	6 80	8 00	9 25	10 50	12 95	15 40	19 00	21 75
2.200	10	.....	3 40	3 70	4 50	5 10	6 00	6 60	8 10	9 50	11 00	12 40	15 35	18 15	21 00	23 80
1.850	12	.....	3 70	4 00	5 20	6 00	6 80	7 40	9 00	10 70	12 75	14 00	17 40	20 75	24 25	27 50
1.600	14	.....	.....	6 20	7 50	8 70	9 70	10 70	13 25	15 20	17 80	19 50	24 20	26 75	30 70	36 70
1.400	16	.....	.....	.....	.....	11 00	12 25	13 70	16 90	19 40	22 00	25 00	30 80	36 50	43 00	48 75
1.250	18	.....	.....	.....	.....	13 75	15 25	17 00	21 75	24 50	28 75	32 00	39 50	47 00	54 50	62 00
1.100	20	.....	.....	.....	.....	.....	.....	20 00	25 00	29 00	34 00	38 00	47 00	56 00	66 00	75 00
1.000	22	.....	.....	.....	.....	.....	.....	.....	29 87	35 50	41 12	46 75	58 00	69 25	80 50	91 75
925	24	.....	.....	.....	.....	.....	.....	.....	.....	43 00	50 00	57 00	71 00	85 00	99 00	113 00
735	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	87 50	109 00	131 00	153 00	175 00
550	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	127 00	157 00	188 00	219 00	250 00

In Ordering, state the kind of work you wish to do and give size of Mandrel.

DISCOUNTS FURNISHED ON APPLICATION.

SOLID EMERY CONE WHEELS.

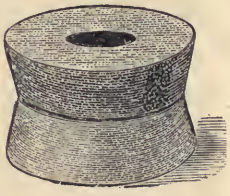


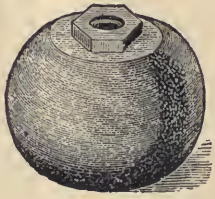
The following sizes can be furnished without delay:

BASE.	TOP.	WIDTH.	
10	$7\frac{1}{2}$	5	$ 23 50
8	5	5	14 00
$7\frac{1}{2}$	$4\frac{1}{2}$	4	11 00
$7\frac{1}{4}$	$5\frac{3}{4}$	$4\frac{1}{4}$	11 50
7	5	5	12 00
7	5	4	11 00
7	4	4	10 00
$6\frac{1}{2}$	5	3	8 00
6	$5\frac{1}{4}$	2	5 50
6	4	$4\frac{1}{2}$	8 00
6	4	4	7 50
$5\frac{1}{2}$	4	4	7 00

Discount.....

SPIDER AND POT WHEELS.





PRICES FURNISHED ON APPLICATION.

Estimates on application for all kinds of special shape solid Emery Wheels.

WRAY'S PATENT PAPER WHEELS.

FOR POLISHING AND BUFFING.

THESE Wheels are made of discs of card board pressed together. Their flexible and absorbing nature specially adapts them for Polishing and Buffing purposes. They are made to run on any kind of mandrel, straight or taper, or on centres.

The advantages of the Paper Wheels are:

1st,—They are more economical. The Emery is glued directly on the Wheel, and the constant expense of renewing the leather covering of wooden Wheels is saved.

2nd,—They are perfectly safe. Owing to the nature of their construction they can be run at any speed with perfect safety, and there is no danger of injuring the operator by the tearing off of the leather as is the case with wooden Wheels.

3rd,—Their face can be easily turned to suit any work.

4th,—They can be *easily* and *quickly* cleaned without removing from the spindle. This is an advantage which will recommend itself to all using Polishing Wheels. The Paper Wheel can be cleaned in *three minutes* without the soaking and without the dirt attending the cleaning of wooden Wheels.

5th,—The rapidity with which they can be cleaned and re-covered, makes fewer Wheels necessary—a manifest saving.

6th,—They are superior for grease and coloring purposes.

7th,—An application of Emery will last longer because of their flexibility and absorbing nature.

8th,—They are the cleanest and most economical Polishing Wheels in the market.

It will cost but a trifle to try then and when once used you will never be without them.

DIRECTIONS FOR USING.

Glue the Emery directly on the Wheel.

To Clean :—Use in preference a black diamond, or, a tool similar to the Huntington Emery Dresser (see page ,) to crack the glue and loosen the Emery, then finish with a buff-stick made with very coarse emery, about number 10 to 14. The Wheel can be quickly and easily cleaned in this way without removing from the spindle. *The emery should be entirely removed each time* before the Wheel is set up anew, as it gives a better finish and the covering lasts longer then when new emery is applied over an old coating partially worn off.

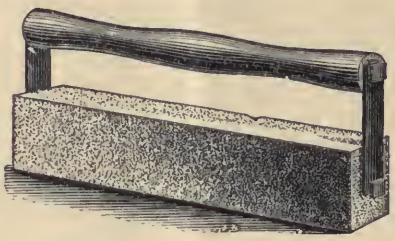
To Alter the Shape of the Face.—Run at about 500 revolutions a minute, using a wood turning tool.

PRICE LIST OF WRAY'S PAPER WHEELS.

Diam. in Inches.	THICKNESS OF WHEEL IN INCHES.													Diam. in Inches
	1	1¼	1½	1¾	2	2¼	2½	2¾	3	3¼	3½	3¾	4	
4	.50	.60	.70	.80	.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.75	4
6	.75	.85	.95	1.05	1 15	1.25	1.35	1.45	1.55	1.65	1.75	1.90	2.00	6
8	1.00	1.15	1.30	1.45	1.60	1.80	2.00	2.15	2.30	2.45	2.60	2.80	3.00	8
10	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.20	3 40	3.60	3.80	4.00	10
12	1.50	1.80	2.10	2.40	2.70	3.00	3 25	3.50	3.75	4.00	4·25	4.50	4.75	12
14	1.75	2.05	2.35	2.65	2.95	3.25	3.50	3.80	4.10	4.40	4.70	5.00	5.25	14
16	2.00	2 35	2.70	3.05	3.40	3.70	4.00	4.35	4.70	5.00	5.35	5.70	6.00	16
18	2.50	2.90	3.30	3.75	4.20	4.60	5.00	5.40	5.85	6.25	6.65	7.00	7.50	18
20	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6 50	7.00	7.50	8.00	8.50	9.00	20
22	3.50	4.05	4.60	5.20	5.80	6 40	7.00	7.60	8.20	8.75	9.35	9.95	10.50	22
24	4.00	5.00	6.00	7.00	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	24

DISCOUNT .....

Miscellaneous Articles.



CORUNDUM BURR STONE DRESSER.

FOR FLOUR MILLS.

Price, ... $3.50

EMERY BLOCKS.

8	x 2	x 1½	inches	price	75c. each.
6	x 2	x 1½	"	"	60c. "
6	x 1½	x 1½	"	"	50c. "
5	x 1½	x ¾	"	"	30c. "

Made in any degree of coarseness or fineness required.

EMERY SLIPS.

6 x 1½ inches ..... 20c. each

THE EMERY WHEEL DRESSER

The principal use of this tool is to remove from the surface of the Wheel any particles of metal that adhere to it in the act of grinding.

Small Wheels can be trued up also with it.

Wherever used this little tool has become an indispensable favorite.

DIRECTIONS FOR USE.

Oil bearings through oil holes frequently. Hold the points of the stars against the face of the Wheel in motion, so that the stars will revolve freely with the Wheel. Press steadily and firmly. The tool is doing its work when the dust flies. A moment or two will generally suffice to freshen up the surface.

SPEED INDICATOR.

An indispensable yet very cheap tool for ascertaining the speed of Mandrels, etc.

Price $1.00

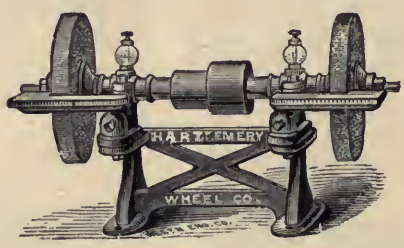
SPEED.

The subject of speed of Emery Wheels deserves far more attention than is generally given to it. No Emery Wheel user should be without a speed indicator, for it gives, exactly and quickly, information that ought to be known.

No Emery Wheel should be run *either slower or faster* than the rates specified by the marker. Slow speed wears away the Wheel, and too high a speed is dangerous. See hints on page 4.

Machines for Metal Workers.

NO. 0 BENCH GRINDER.



For 2 Wheels—2 speeds.

Size of Wheel to be used—8 x 1, or smaller.

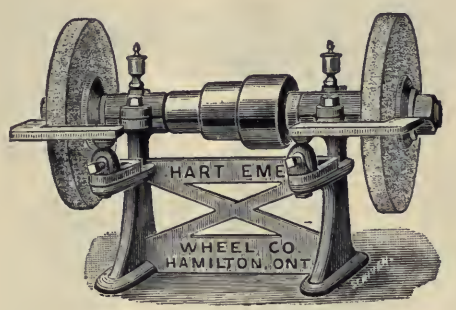
Price $25.00—Complete, with Countershaft, without Emery Wheels.

Length of Steel Mandrel	17	inches
Diameter of Steel Mandrel	$\frac{3}{4}$	inch
Diameter of Collars	3	inches
Diameter of Cone Pulley	2 and 3	"
Face of Cone Pulley	2	"

COUNTERSHAFT.

Diameter of Driving Cone Pulley	10 and 9	inches
Face of Driving Cone Pulley	2	"
Diameter of Fast and Loose Pulleys	4	"
Face of Fast and Loose Pulleys	3	"
Height of Machine to Center of Mandrel	7	"
Weight, Complete, with Countershaft	85	lbs.

NO. 1 BENCH GRINDER.



For 2 Wheels—3 Speeds.

Size of Wheel to be used—12 x 1, or smaller.

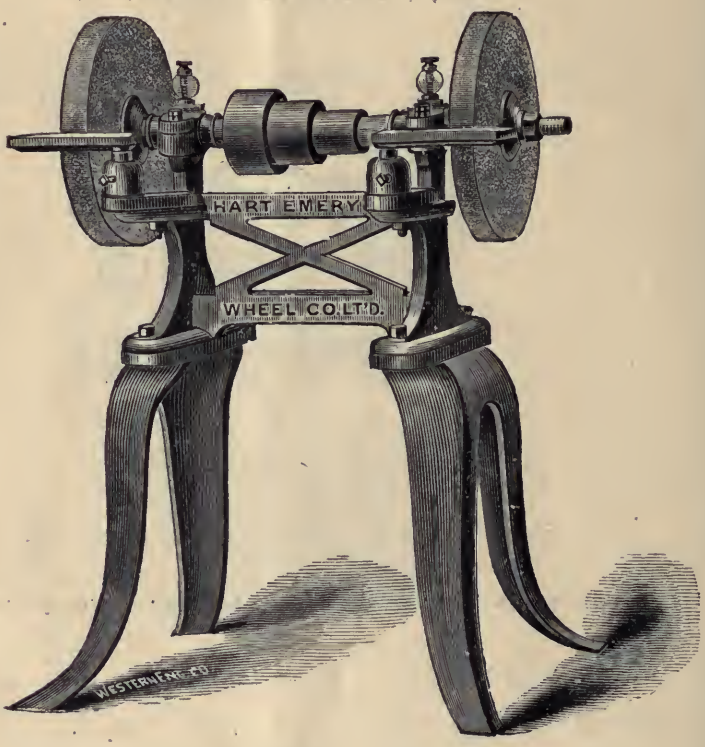
Price $35.00—Complete, with Countershaft, without Emery Wheels.

Length of Steel Mandrel	24	inches
Diameter of Steel Mandrel	1	inch
Diameter of Collars	4	inches
Diameter of Cone on Mandrel	2, 3 and 4	inches
Face of Cone on Mandrel	2	inches

COUNTERSHAFT.

Diameter of Driving Cone Pulley	10, 9 and 8	inches
Face of Driving Cone Pulley	2	inches
Diameter of Fast and Loose Pulleys	4	inches
Face of Fast and Loose Pulleys	3	inches
Height of Machine to Centre of Mandrel	9½	inches
Weight	about 175	lbs.

NO. 3 GRINDER.



For 2 Wheels—3 Speeds.

Size of Wheels to be used on this Machine—12 x 1½ to 14 x 2.

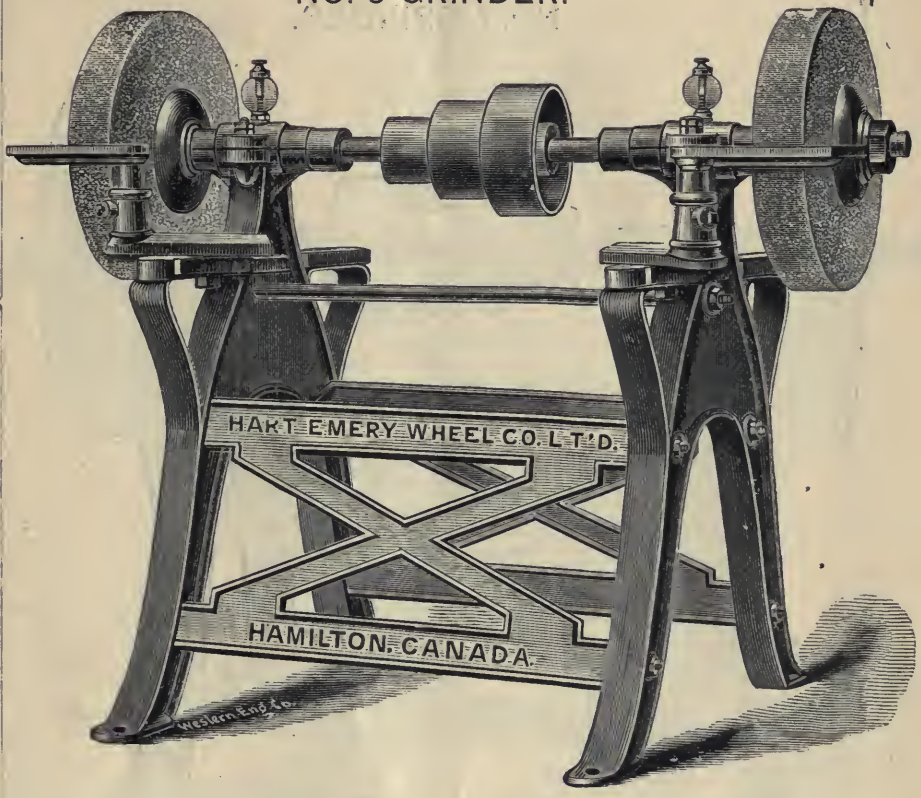
Price $50.00—Complete, with Countershaft, without Emery Wheels.

Distance between Wheels	2	feet
Length of Steel Mandrel	2 feet, 10	inches
Diameter of Steel Mandrel	1¼ or 1½	inch
Diameter of Collars	4	inches
Diameter of Cone on Mandrel	3, 4 and 5	inches
Face of Cone on Mandrel	3	inches

COUNTERSHAFT.

Diameter of Driving Cone Pulley	14, 13 and 12	inches
Face of Driving Cone Pulley	3	inches
Diameter of Fast and Loose Pulleys	6	inches
Face of Fast and Loose Pulleys	4	inches
Height of Machine to Centre of Mandrel	2 feet 10	inches
Weight of Machine and Countershaft	400	lbs.

NO. 5 GRINDER.



For 2 Wheels—3 Speeds.

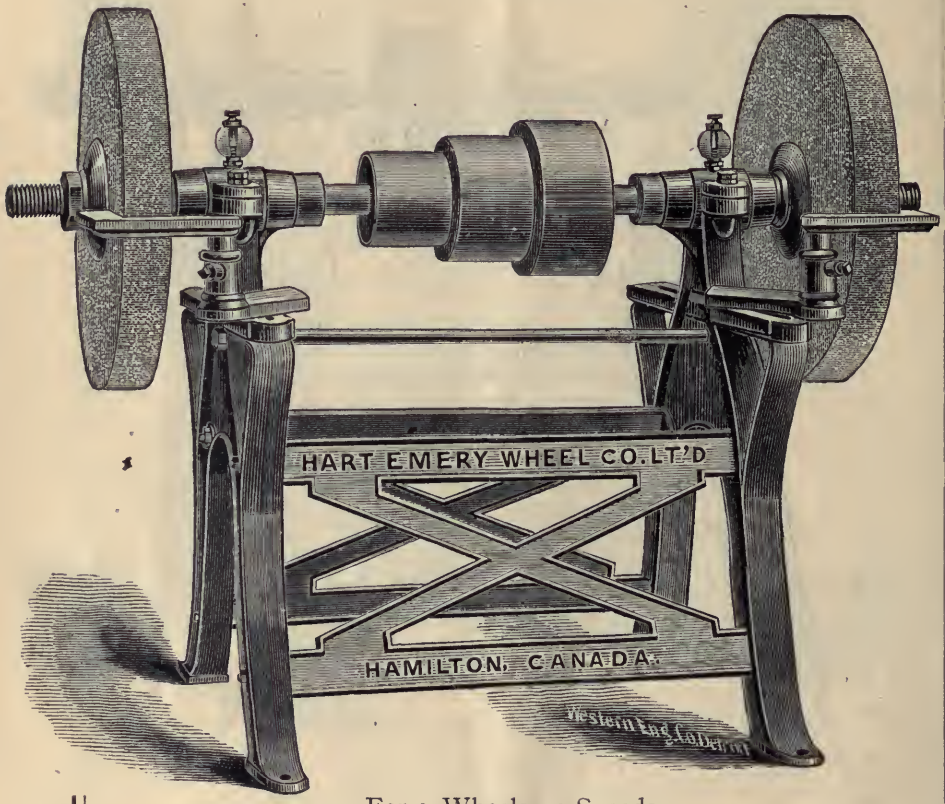
To take wheels to 24 x 2 inches.

N. B.—The ends of the mandrel will be turned down to order if required.

Price $80.00.—Complete, with Countershaft, without Emery Wheels.

Distance between Wheels	3 feet 2 inches
Length of Steel Mandrel	4 feet, 2 inches
Diameter of Steel Mandrel	2 inches
Diameter of Collars	7 inches
Diameter of Cone Pulley	4, 5 and 6 inches
Face of Cone Pulley	4 inches
COUNTERSHAFT.	
Diameter of Driving Cone Pulley	16, 15 and 14 inches
Face of Driving Cone Pulley	4 inches
Diameter of Fast and Loose Pulleys	8 inches
Face of Fast and Loose Pulleys	5 inches
Height of Machine to Center of Mandrel	2 feet, 9 inches
Weight, with Countershaft	700 lbs.

NO. 7 GRINDER.



For 2 Wheels—3 Speeds.

Size of Wheels to run on this Machine—24 in. to 30 x 4 in.

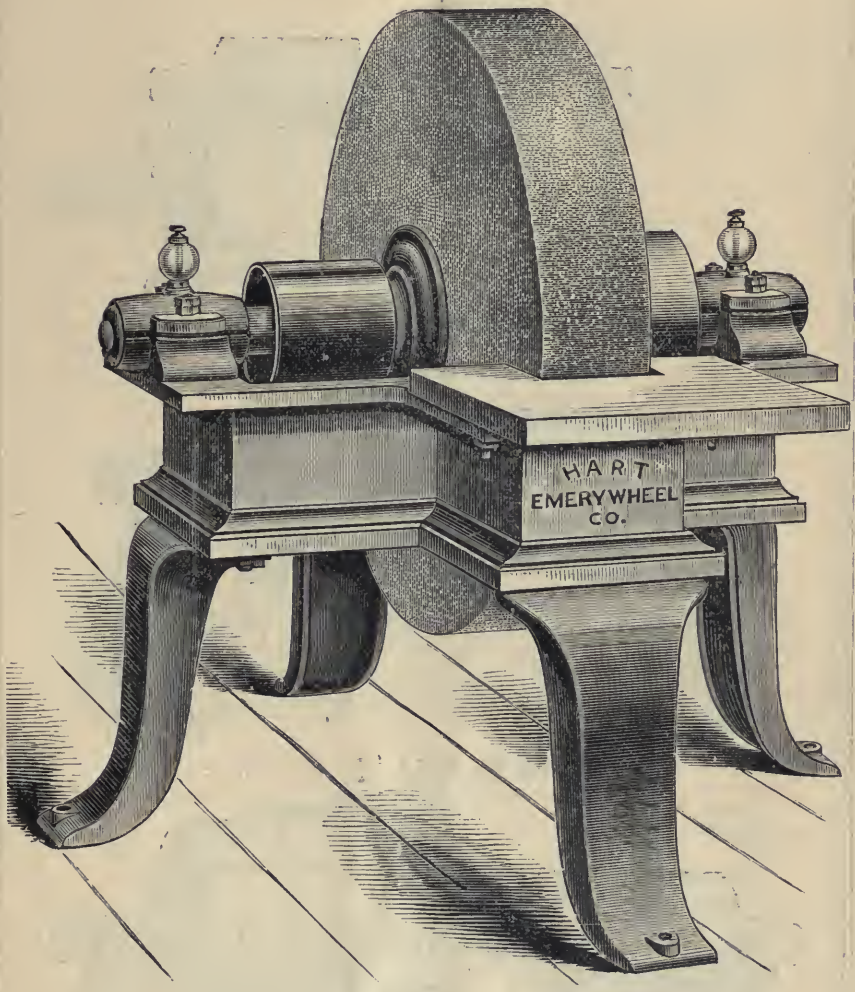
Price $120—Complete, with Countershaft, without Emery Wheels.

Distance between Wheels	3 feet, 8 inches
Length of Steel Mandrel	5 feet, 4 inches
Diameter of Mandrel	2 inches
Diameter of Collars	8 inches
Cone on Mandrel	6, 8 and 10 inches

COUNTERSHAFT.

Diameter of Driving Cone Pulley	20, 18 and 16 inches
Diameter of Fast and Loose Pulleys	12 inches
Face of Fast and Loose Pulleys	6 inches
Weight, complete, with Countershaft	1000 lbs.

NO. 9 GRINDER.

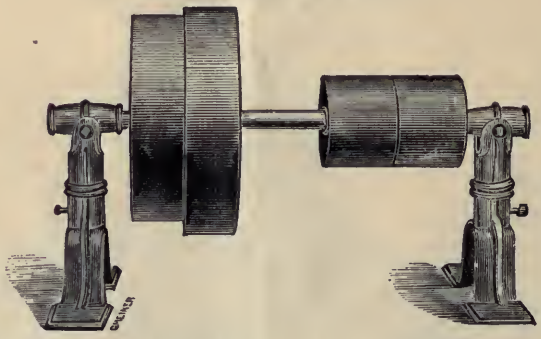


For 1 Wheel, 36 x 6—2 speeds.

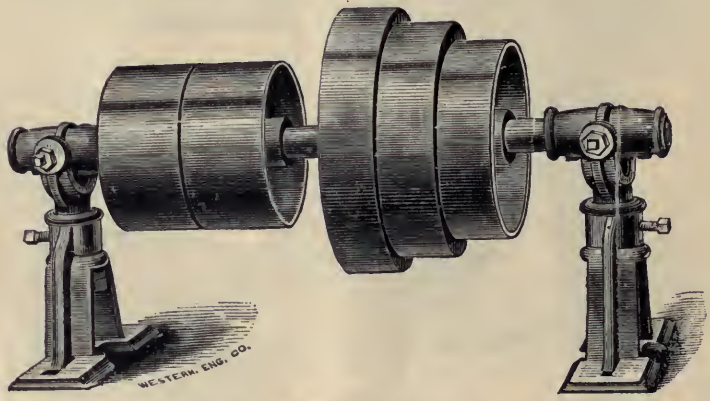
PRICE $150 00—Without Wheel or Countershaft.

Diameter of Mandrel	2¾ inches
Diameter of Collars	11 inches
Base of Machine	4 feet, 6 inches
Weight	1,400 lbs.

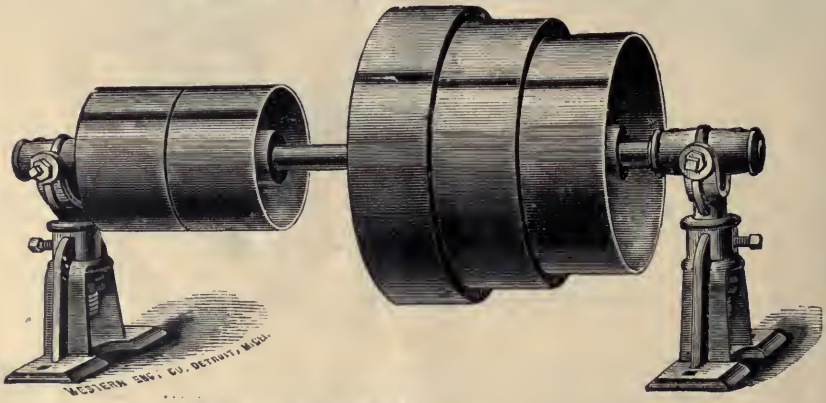
COUNTERSHAFTS.



NO. 0 FOR GRINDER "0" (See Page 17).



NO. 3 FOR GRINDER "3" (See Page 18)



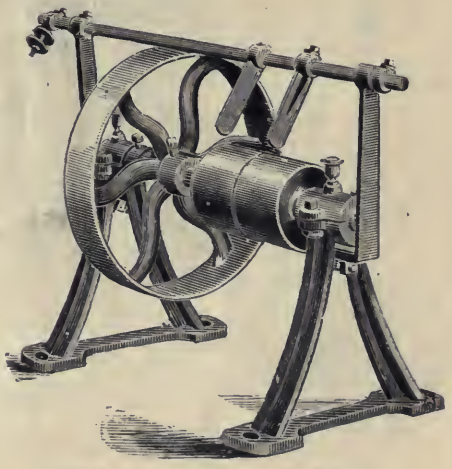
NO. 5 FOR GRINDER "5" (See Page 19).

Shippers are sent with all Countershafts.

NO 11 GRINDER.

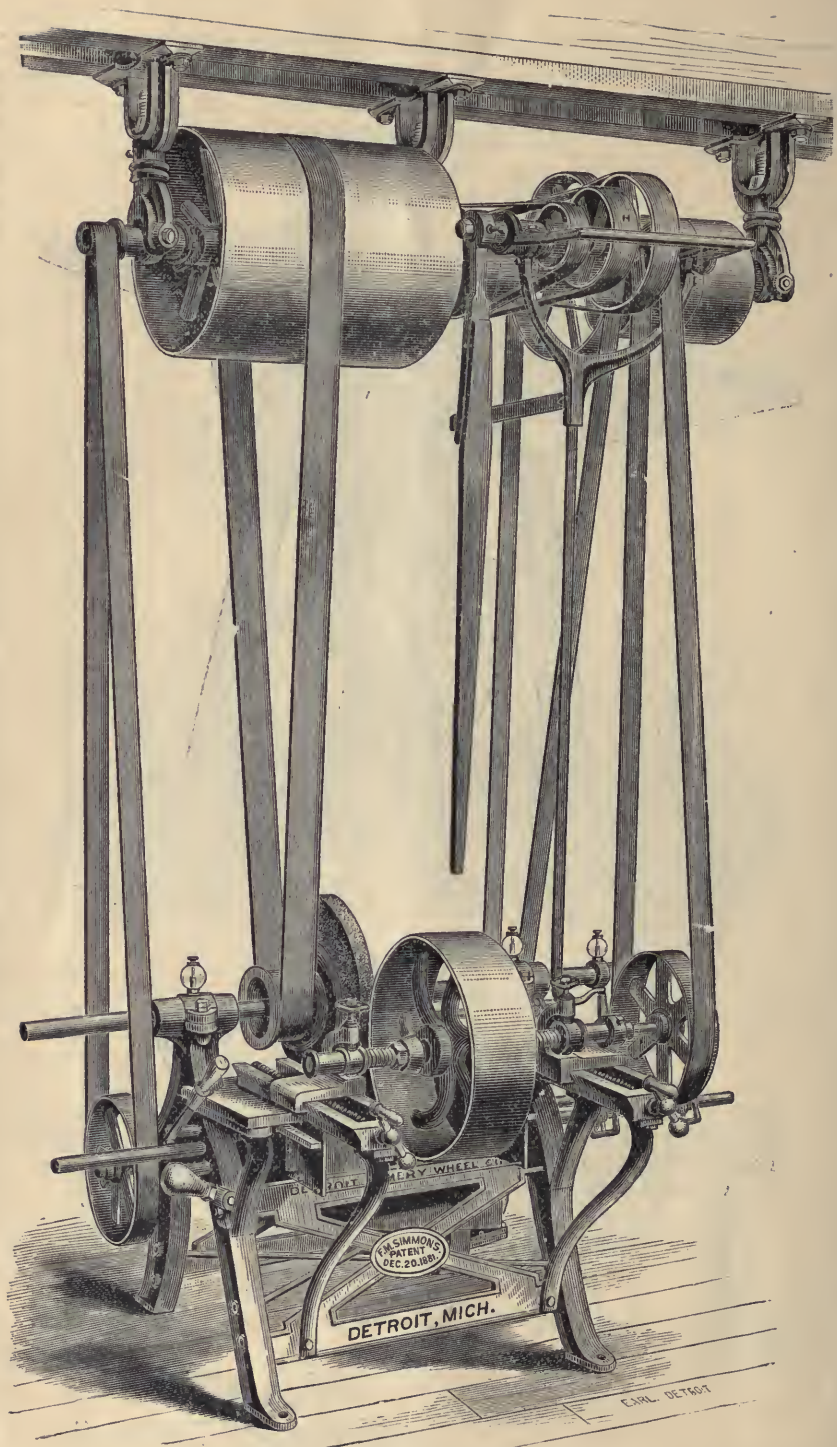
FOR STOVE PLATE GRINDING.

PRICE—With Countershaft (no Wheel) $100.



Discount ....

COUNTERSHAFT FOR NO. 11.



SIMMON'S PULLEY GRINDER.

THE SIMMONS' PULLEY GRINDER.

This is an economical machine for finishing pulleys from the smallest to 48 inches diameter and 16 inches face. With good castings it does much faster and better work than a lathe, It finishes castings that chance to be chilled as well as those that are not. Pulleys finished with this machine are much nearer perfect than when done in the ordinary way.

THE JOHN T. NOYE MANUFACTURING CO.,
BUFFALO, N. Y., Feb. 25, 1884.

Detroit Emery Wheel Co. :

GENTLEMEN—The Simmons Pulley Grinder we bought of you in 1882 has been in almost constant use since then, and as far as we know it has not its equal for capacity, quality or quantity of work, and when first cost is considered, it will do more and better work with unskilled labor than any pully lathe made for double the price that we have any knowledge of at present.

Yours respectfully,
THE JOHN T. NOYE MNFG CO.,
Per CAMPBELL.

THE BROWN COTTON GIN CO.,
NEW LONDON, Conn., Feb. 13, 1884.

Detroit Emery Wheel Co :

GENTLEMEN—Your favor of the 9th inst is at hand. In reply we will say that the Pulley Grinding machine we bought of you two years since has been in almost constant use the whole time, and is now apparently in as good condition as when first started. The repairs have cost comparatively nothing. The machine has given us entire satisfaction, and we can't see now how we could very well get along without it. Yours truly,
THE BROWN COTTON GIN CO.
E. T. BROWN, Treasurer.

MORAVIA FOUNDRY AND MACHINE SHOP,
MORAVIA, N. Y., April 22, 1884.

Detroit Emery Wheel Co: :

GENTLEMEN—In reply to yours we will say that the Simmons' Pulley Grinder we bought of you last summer is saving us money every day we use it. We have no trouble in doing twice the work with it that we can with our best lathes, (and we have some that are first class). We have finished pulleys on it that were chilled so that we could hardly touch them with a lathe tool, thus saving us some very hard castings that would otherwise have to go to the scrap heap.

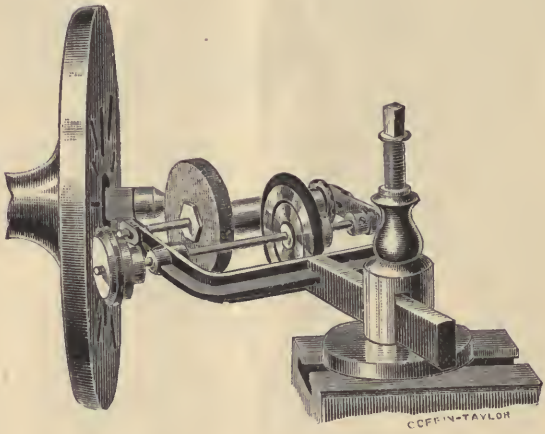
Respectfully yours,
MORAVIA FOUNDRY AND MACHINE CO.,
D. THOMPSON, Treasurer.

THE GEO. T. SMITH MIDDLINGS PURIFIER CO.,
September 15, 1884.

Detroit Emery Wheel Co :

GENTLEMEN—We have used your Pulley Grinder for the last two years with perfect satisfaction, and find it will do all you claim for it.

Very respectfully,
G. T. SMITH MIDDLINGS PURIFIER CO.
GEO. F. SHERWOOD, Supt.



ROGERS' LATHE CENTRE GRINDER.

PRICE—$8.00.

The following are the points which recommend this tool to machinists:

1st.—Centres can be kept hardened.

2nd.—The grinder can be quickly applied to any lathe.

3rd.—It is complete in itself and needs no pulleys or belts.

4th.—It is cheap and durable.

POLISHERS' SUPPLIES.

Best Hard Nickel Rouge..... per lb.

No. 2 D. ..... per lb.

Gold Rouge..... per lb.

Crocus Martis..... per lb.

Crocus Composition..... per lb.

White Tripoli Composition..... per lb.

Pure Nickel Salts..... per lb.

Pure Nickel Anodes..... per lb.

Pumice stone ordinary lump..... per lb.

" " Extra select..... per lb.

" " Ground and bolted..... per lb.

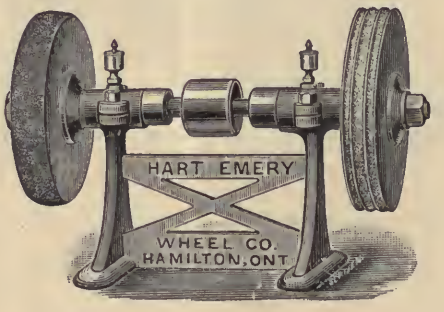
Ground Quartz, all sizes..... per lb.

Felt Polishing Wheels, Brown..... per lb.

" " " White..... per lb.

Machines for Metal Polishers use.

NO. 1½ BENCH FRAME.



For running Paper Polishing Wheels up to 14 x 2.

PRICE $30.00—Complete With Countershaft (no wheels.)

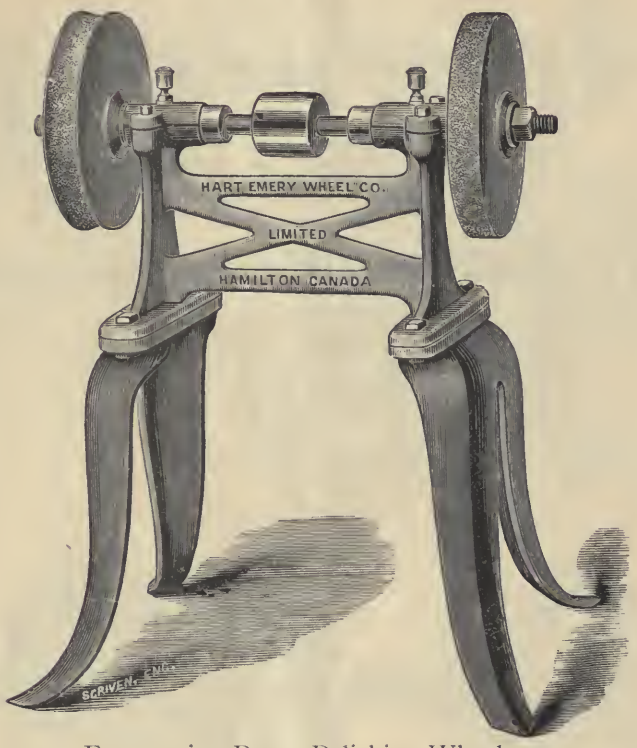
Length of Steel Mandrel	24 inches.
Diameter of Steel Mandrel	1 inch.
Diameter of Collars	4 inches.
Diameter of Pulley on Mandrel	3 "
Face of Pulley on Mandrel	2¼ "

COUNTERSHAFT.

Diameter of Driving Pulley	10 inches.
Face of Driving Pulley	3 inches.
Diameter of Fast and Loose Pulleys	4 "
Face of Fast and Loose Pulleys	3 "
Height of machine to centre of Mandrel	9½ "
Weight with Countershaft	140 pounds.

NO. 3½ POLISHING FRAME.

TO STAND ON FLOOR.

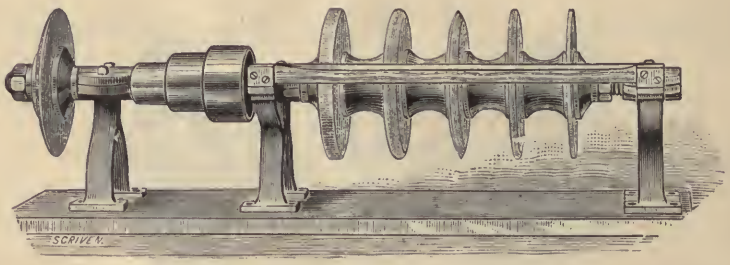


For running Paper Polishing Wheels.

PRICE, $45.00—Complete with Countershaft, (no wheels.)

Length of Steel Mandrel	2 feet, 10	inches,
Diameter of Steel Mandrel	1¼	inches.
Diameter of Collars	4	inches.
Diameter of Pulley on Mandrel	4	inches.
Face of Pulley on Mandrel	4	inches.
COUNTERSHAFT.		
Diameter of Driving Pulleys	18	inches.
Face of Driving Pulleys	4	inches.
Diameter of Fast and Loose Pulleys	4	inches.
Height of Machine to centre of Mandrel	1 feet, 10	inches.
Weight of Machine and Countershaft	350 lbs.	

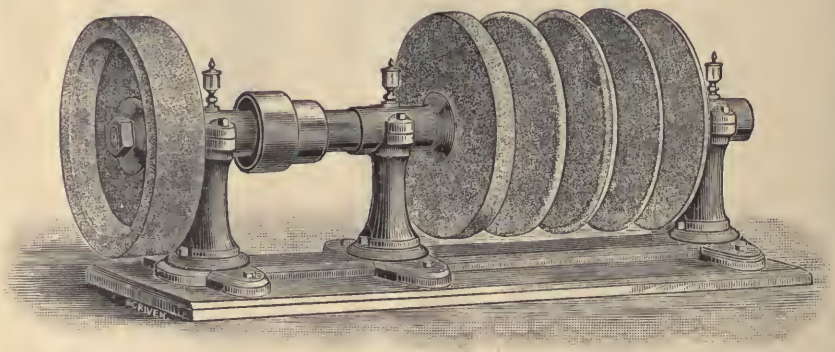
Machines for Wood Workers' use.



NO. 2 PLANING MILL GRINDER AND COUNTERSHAFT.

PRICES.

No. 2 Planing Mill Grinder, Countershaft and 6 wheels, 8 in diameter..... $40.00
No. 2 Planing Mill Grinder, Countershaft and 6 wheels, 9 in diameter..... $45.00
No. 2 Planing Mill Grinder, Countershaft and 6 wheels, 10 in diameter..... $50.00



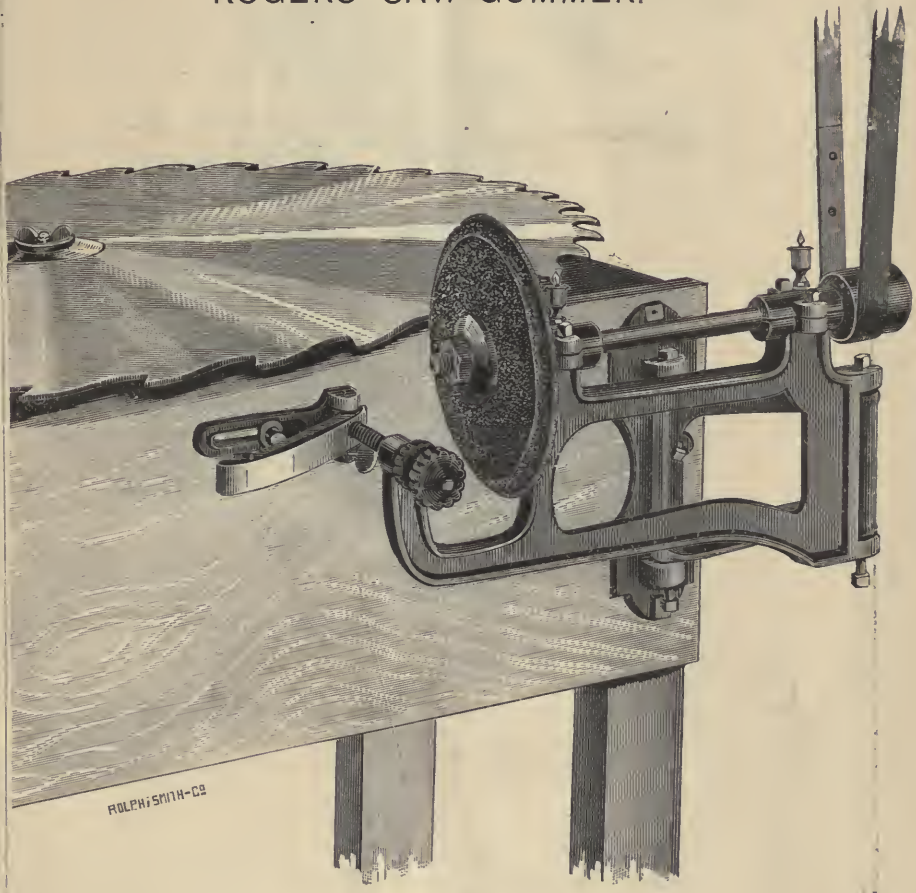
NO. 2½ PLANING MILL GRINDER AND COUNTERSHAFT.

On iron base—specially heavy to run wheels 12 inches diameter.

PRICE—With wheels as represented in cut, $80.00.

The assortment of Wheels can be varied, and prices will correspond.

ROGERS' SAW GUMMER.

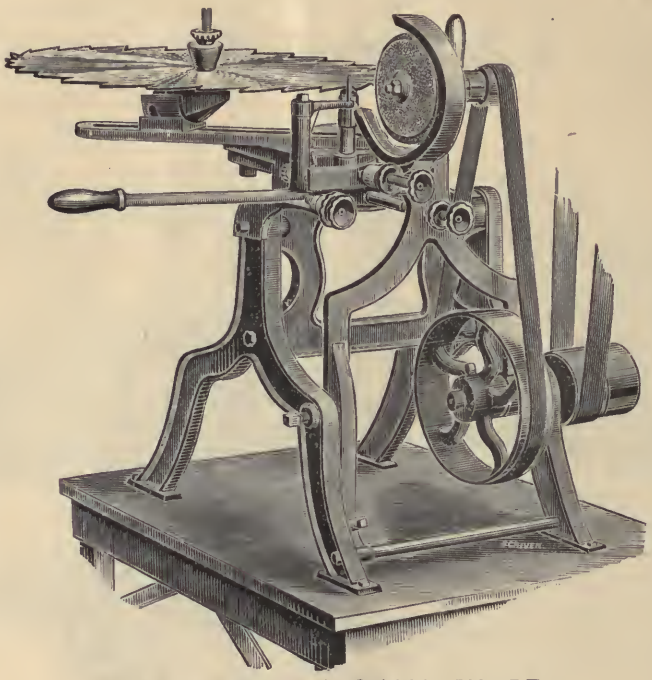


FOR GUMMING SAWS.

In this Saw Gummer the Wheel is moved to the Saw. It will gum any size of Saw up to six feet diameter. The operator, being close to the work, can easily avoid heating. Each tooth is gummed exactly like the tooth preceding. The guides and stops make it unnecessary to mark off the saw before gumming.

PRICE $40.00—Complete with Emery Wheel, Table and Countershaft.

Discount.....



THE ROGERS SAW FILER.

Patented in Canada the United States and Great Britain:

This is a light, handy machine, specially adapted for sharpening rip and cross-cut circular saws, from 6 inches to 36 inches in diameter. It not only sharpens the teeth perfectly, but it keeps them gummed and in uniform size and shape. No files are needed where the Rogers Saw Filer is used.

It will be seen by reference to the illustration above that this Filer is what may be called semi-automatic. The operator, in the act of sharpening, simply moves the lever back and forth. That action causes both saw and emery wheel to move in unison, so that each tooth is filed precisely as the operator desires. The throat, breast and back can all be filed, or any one of them can be operated on at will.

All the work is done with precision. Screw stops and guides control the movement of the saw and wheels..

The saws are kept perfectly round, and the teeth all project the same distance from the centre.

Three valuable points have been noticed by all who have used this Filer; viz: the saws do better work, keep sharp longer, and do not wear away so fast.

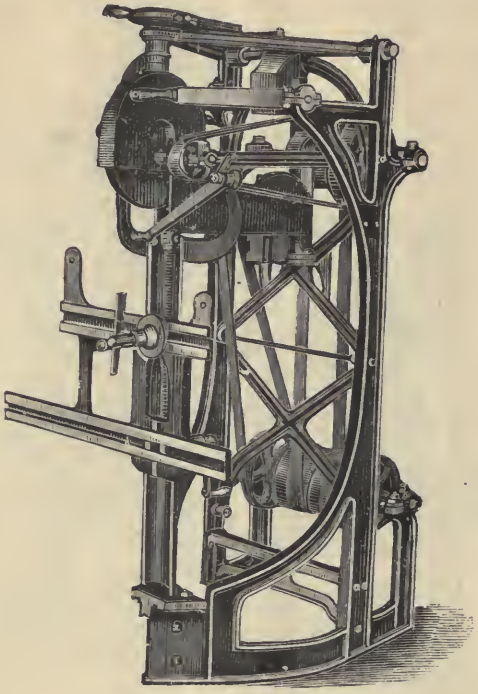
PRICE $50.00 net.—With Emery Wheels.

Up to the date of going to Press, the Rogers' Saw Filer is now used in the following manufacturing establishments in Ontario and the list is continually increasing :

Ayr.....Watson Manufacturing Co.
Belleville.....G. S. Tickell & Son.
Berlin.....Simpson & Co.
Berlin.....Krugg & Hibner.
Berlin.....J. Y. Shantz.
Brampton.....Haggert Manufacturing Co.
Bloomingdale .....W. Erb & Son.
Brantford.....A. Harris Son & Co.
Brantford.....Shultz Bros.
Brampton.....W. A. McCulla.
Cobourg.....Jas. Crossen.
Dundas.....Jos. Bowman.
Dundas.....Gurney Manufacturing Co
Galt.....Goldie & McCulloch.
Galt.....Victoria Wheel Co.
Georgetown.....Aldous & Co.
Guelph.....Burr Bros.
Guelph.....T. Gowdy & Co.
Hamilton .....M. Brennan & Son.
Hamilton.....Casey & Sons.
Hamilton.....R. Cruickshank.
Hamilton.....J. Hoodless & Son.
Hamilton.....F. W. Hore & Son.
Hamilton.....Patterson Bros.
Hamilton .....L. D. Sawyer & Co.
Hamilton.....R. M. Wanzer & Co.
Hamilton.....J. Zingsheim.
Hanover.....D. Knechtel.
Harriston.....Dowling & Leighton.
Ingersoll.....W. C. Bell.
Ingersoll.....Noxon Bros.
Kincardine.....Watson & Malcolm.
Listowell.....Hess Bros.
Listowell.....J. & J. Large.
London.....J. C. Dodd & Son.
London.....London Furniture Co.
Newmarket.....Wm. Kane & Sons M'f'g Co.
Parkdale.....Parkdale Lumber M'f'g Co.
Paris.....David Maxwell.
Patterson.....Patterson & Bro.
Tilsonburg.....E. D. Tillson.
St. Thomas .....J. M. Green.
Toronto.....Bryce Bros.
Toronto.....Firstbrook Bros.
Toronto.....J. P. Wagner & Co.

Toronto.....J. Fletcher.
Toronto.....Kennedy & Co.
Toronto.....Massey Manuf'g Co.
Toronto.....W. Simpson.
Toronto.....D. W. Thompson & Co.
Toronto.....Withrow & Hillock.
Wingham.....Scott & Bell.
Woodstock.....J. Hay & Co.
Woodstock.....F. B. Scofield.
Woodstock.....E. G. Thomas & Co.
Woodstock.....D. W. Karn & Co.

TOTMAN'S ACME SAW SHARPENER.



PATENTED IN CANADA AND UNITED STATES.

PRICE— - - - $

With this machine it is possible to joint perfectly, and to gum and sharpen all kinds of circular saws used in the manufacture of lumber, lath and shingles, and it may be used in all wood-working factories where saws are used.

Equally useful on rip and cross-cut saws. Can be at once adjusted to any bevel up to 50 degrees.

It can be adjusted to take from the smallest to the largest circulars in TWO MINUTES.

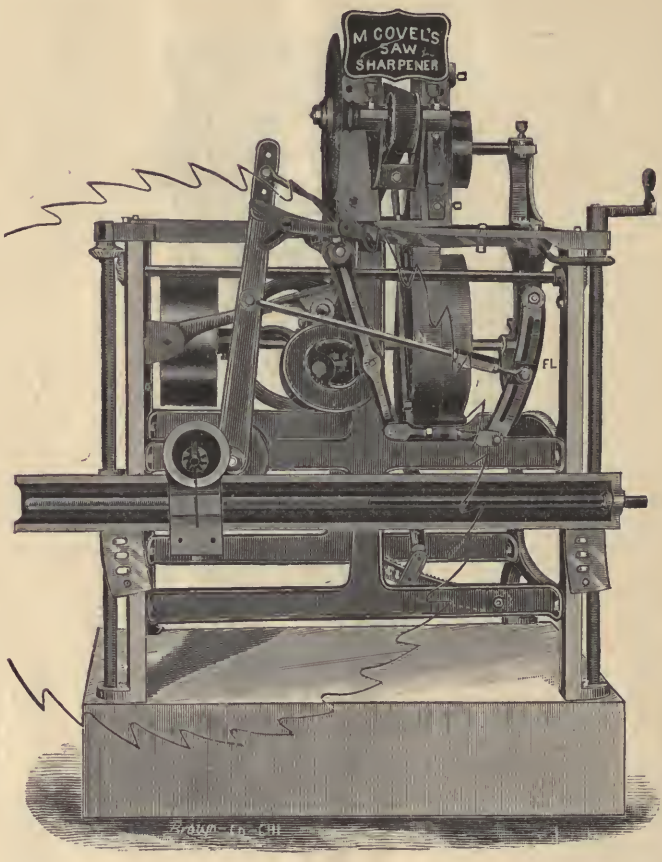
It can be changed from pertect work on circulars to perfect work on drags and slabbers in THREE MINUTES.

When properly handled very little filing is necessary.

One very distinguishing feature of this machine is the iron shield of the emery wheel. The shield is combined with an exhaust fan which carries away the emery and steel from the operator. This feature of itself gives the machine a decided advantage over others.

REFERENCES :—Gilmour & Co., Trenton, Ont. ; The Rathbun Company, Deseronto, Ont.

M. COVELL'S



AUTOMATIC SAW SHARPENER.

This cut represents Covell's Automatic Saw Sharpener adjusted to take circular saws. It is also adapted for Gang and large Band Saws. These machines for sharpening Rip Saws, are in the United States and Canada, conceded to be the most accurate and reliable of any machines now made, and nearly 600 of them are in the best mills, selected by persons who have known what they wanted and have been suited in their choice. Full instructions sent with each machine.

PRICE - - - $200.00.

Machines for Flour Milling.

THE IMPROVED CRAIG WHEAT SCOURER.

SPECIAL FEATURES

Does not break the grain.

Scours large and small grain equally well.

Improves the color of the flour in any mill it is introduced into.

Takes up little room.

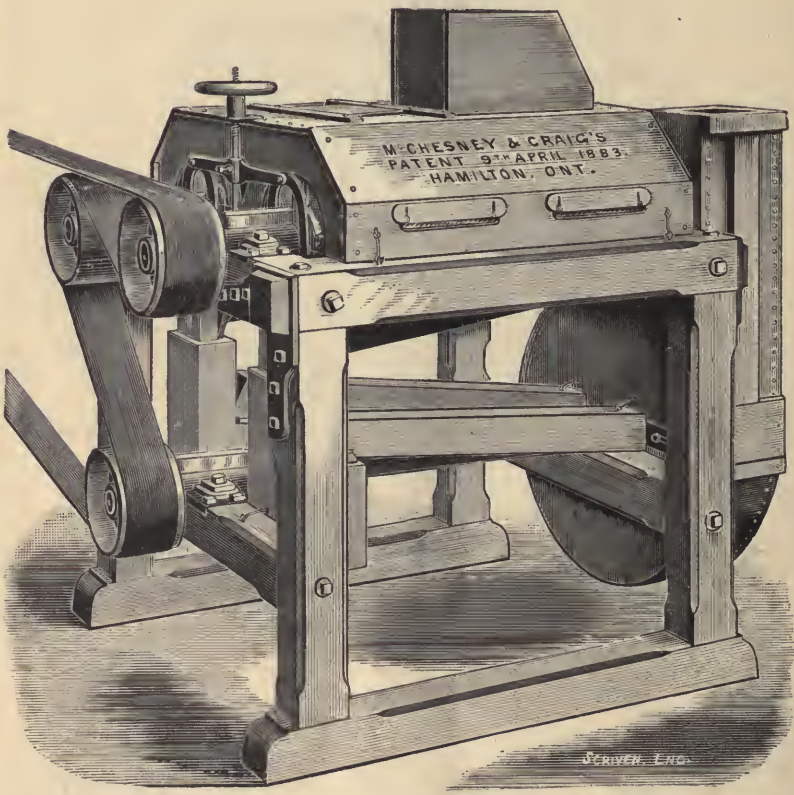
Runs light.

Is thoroughly built for durability.

The scouring material being solid corundum, the hardest substance in nature, next to the diamond, the scouring discs do not loose their efficiency from the contact with the wheat.

Full information as to terms, etc., will be furnished on application.

WHEAT SCOURER.



No. 2—Capacity, 50 bushels per hour.

CAPACITY AND DIMENSIONS OF THE

IMPROVED CRAIG WHEAT SCOURER.

NO.	CYLINDERS.	CAPACITY IN BUS. PER HOUR.	EXTREME HEIGHT.	EXTREME LENGTH.	EXTREME WIDTH.	H'IGHT OF FEED FROM FLOOR.	HEIGHT OF DISCHARGE FROM FLOOR.	PRICE.
1	1	25 to 35	39 inches.	56 inches.	25 inches.	39 inches.	16 inches	$ 180 00
2	2	50 to 70	52 inches.	58 "	42 "	52 "	24 "	300 00
3	3	75 to 105	52 "	58 "	42 "	52 "	5 "	425 00
4	4	100 to 140	57 "	60 "	44 "	57 "	5 "	560 00

CRAIG WHEAT SCOURERS,

Manufactured by the Hart Emery Wheel Co. (Limited), are in use in the following Mills in Canada :

Guelph.....Jas. Goldie.
St. Catharines.....Jas. Norris.

The IMPROVED Scourers are in use in the undermentioned Mills :

Alvinston.....Martyn & Binder.
Ayton.....N. Wenger & Bros.
Blair.....J. Hilborn
Delhi.....Peter Quance.
Deseronto.....The Rathbun Co.
Elfrida.....Rich & Quance.
Elmira.....John Ratz.
Eramosa.....Alonzo Berge.
Hamilton.....Wm. Fitzgerald.
Heidelberg.....Chas. Kreutziger.
Highgate.....Tolson, Scott & Co.
Ingersoll.....Wm. Partlo.
Ingersoll.....Jas. Smith.
Jona.....Wm. Henderson.
Lachute Mills, Que.....Fish & Iceland.
Mitchell.....Peter Stuart.
Norval.....Rob't Noble.
Picton.....Jos. C. Wilson,
Plattsville.....Snider & Steckle.
Rapid City, Man.....Geo. Balkwill.
Riceville.....Peter McLaurin.
St. Jacobs.....E. W. Snider.
Simcoe.....Wm. Sutton,
Tavistock.....Tavistock Milling Co.
Thamesford.....Jos. Cawthorpe.
Thornbury.....I. & J. N. Andrews.
Waterloo.....Wm. Snider & Co.
Woodstock.....McDonald & Thomson.

THE

HART EMERY WHEEL CO.

(LIMITED),

KEEP A FULL LINE OF

GRAIN EMERY

ON HAND FROM THE

FINEST TO THE COARSEST SIZES.

ALSO, A SUPPLY OF CORUNDUM.

PRICES:—Lowest Current Quotations.

HART

EMERY WHEEL Co.

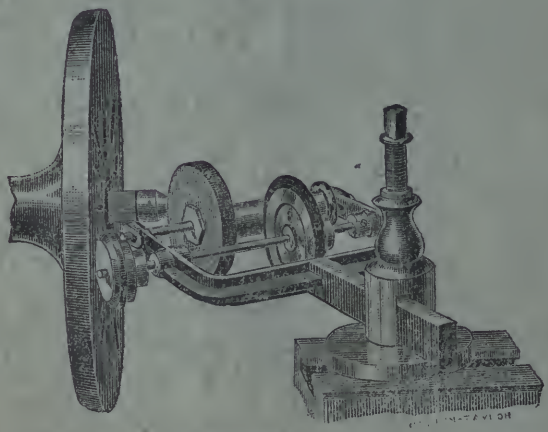
(LIMITED),

MANUFACTURERS OF

HART'S PATENT EMERY WHEEL

—AND—

All kinds of Machines for Emery Grinding and Polishing.



Rogers' Lathe Centre Grinder.

HAMILTON, ONTARIO,

CANADA.